## REMARKS

Applicant would like to thank the Examiner for the careful consideration given the present application. The application has been carefully reviewed in light of the Office action, and amended as necessary to more clearly and particularly describe the subject matter which applicant regards as the invention.

The Examiner rejected claims 1-5 on the ground of non-statutory obviousness-type double patenting as being unpatentable over claims 1-11 of U.S. Pat. No. 7,119,510.

Applicant notes that a timely filed terminal disclaimer in accordance with 37 CFR 1.321(c) was filed with Amendment C dated January 5, 2009 thereby removing U.S. Pat. No. 7,119,510 as a reference and, thus, overcoming the double patenting rejection.

The Examiner rejected claims 1-5 under 35 U.S.C. 102(e) as being anticipated by Takenaka et al., U.S. Pat. No. 6,243,623. The Examiner's rejection is traversed for the following reason.

In regards to claim 1, Applicant discloses a method of successively estimating the position of a floor reaction force acting point of each leg of a biped walking mobile body. The method includes a first step for successively grasping the position of the center of gravity of the biped walking mobile body, the position of the ankle joint of each leg, and the position of the metatarsophalangeal joint of the foot of the leg, respectively. The first step further includes successively grasping the vertical distance from the ankle joint to a ground contact surface of each leg in contact with the ground while the biped walking mobile body is in motion. A first ground contact

sensor and a second ground contact sensor are provided on the sole of the foot of each leg of the biped walking mobile body. The first and the second ground contact sensors output ground contact detection signals based on whether a place directly below an ankle joint of a leg and a place directly below a metatarsophalangeal joint of the foot of the leg, respectively, are in contact with the ground.

The method further includes a second step wherein, for each leg in contact with the ground while the biped walking mobile body is in motion, the horizontal position of one of the center of gravity, the ankle joint of the leg, and the metatarsophalangeal joint of the leg, the positions thereof having been determined in the first step, is successively estimated selectively as the horizontal position of the floor reaction force acting point of the leg on the basis of at least the combination of contact or no contact with the ground indicated by a ground contact detection signal of the first ground contact sensor and contact or no contact with the ground indicated by a ground contact detection signal of the second ground contact sensor of each leg. Further, the vertical position of the floor reaction force acting point of the leg is successively estimated as the position apart vertically downward from the ankle joint by the vertical distance from the ankle joint to the ground contact surface of the leg determined in the first step.

Thus, a feature of the present invention includes a first and second ground contact sensor 51*f*, 51*r* for detecting contact or no contact with the ground. As clearly shown in FIG. 2, the ground contact sensors 51*f*, 51*r* are located on the sole of the foot 13, see paragraph [0067].

Takenaka, on the other hand, discloses a mobile robot control apparatus that does not include any type of ground sensor. Takenaka simply includes a six-force

axis sensor. Thus, Applicant contends that Takenaka does not teach all the features of claim 1. Specifically, Takenaka does not teach "a first ground contact sensor and a second ground contact sensor being provided on the sole of the foot of each leg of the biped walking mobile body."

Rather, Takenaka teaches a control apparatus for a leg-type mobile robot that includes a six-axis force sensor 44. Referring to column 9, lines 1-8, and to FIGS. 1 and 2, the six-axis force sensor 44 is located between the ankle joint 18R(L), 20R(L) and the foot 22R(L) of each leg 2. The six-axis force sensor 44 is not located on the sole of each foot, as required by claim 1 of the present invention.

Further, the Examiner stated that an inclination sensor 60 and a yaw rate sensor 100 correspond to the first ground contact sensor and the second ground contact sensor respectively of the present invention. Applicant respectfully disagrees. Referring to column 9, lines 8-13, and to FIG. 1, the inclination sensor 60 is located in the body 24 of the robot and not on the sole of each foot, as required by claim 1 of the present invention. Further, referring to column 28, lines 1-7, the yaw-rate sensor 100 is also located at an appropriate location in the body 24 of the robot and not on the sole of each foot, as required by claim 1 of the present invention. Thus, Takenaka does not teach a first and second ground contact sensor on the sole of each foot.

Based on the foregoing, it is apparent that Takenaka does not teach or suggest all the features of claim 1 and therefore cannot be cited as anticipating claim 1. Thus, reconsideration and withdrawal of the rejections of claim 1 based upon Takenaka are hereby requested.

Claims 2-5 depend from claim 1, thus, all arguments pertaining to claim 1 are

equally applicable to these claims and are herein incorporated by reference.

In light of the foregoing, it is respectfully submitted that the present application is in a condition for allowance and notice to that effect is hereby requested. If it is determined that the application is not in a condition for allowance, the Examiner is invited to initiate a telephone interview with the undersigned attorney to expedite prosecution of the present application.

If there are any additional fees resulting from this communication, please charge same to our Deposit Account No. 18-0160, our Order No. SAT-16287.

Respectfully submitted,

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